

NMRC-A Researchers Present Findings on Surveillance Study for Acute Novel Respiratory Infections at ASTMH 2017

Story Number: NNS171115-20 Release Date: 11/15/2017 12:56:00 PM

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From Naval Medical Research Center Public Affairs

BALTIMORE (NNS) -- Researchers from the U.S. Naval Medical Research Center - Asia (NMRC-A) presented findings on a study identifying novel respiratory viruses causing morbidity in people or domestic animals, with the potential to spread to people.

The findings were presented at the American Society of Tropical Medicine and Hygiene Annual Meeting, November 7.

"We ultimately seek to detect and characterize viruses before they fully cross over to humans with the potential of causing an epidemic," said Cmdr. Tyler Warkentien, principal investigator.

Warkentien, along with others at NMRC-A, developed a multi-phase surveillance program at four hospitals in Vietnam focusing on severe acute respiratory infections (SARI) caused by viruses prone to causing epidemics.

"The aim of the first phase is to develop a sustainable sentinel surveillance system that strengthens the ability to detect emerging infections," said Warkentien.

NMRC-A researchers in collaboration with Duke National University Singapore (Duke - NUS), trained local staff in the molecular techniques using algorithms developed for evidence in nasopharyngeal samples of human adenovirus, influenza viruses, enteroviruses and coronavirus infections.

According to Warkentien, "when an algorithm indicates a patient may be suffering from a recognized human virus, a specimen will be shared for further culture and sequence-based study. Additionally, samples of the specimens that screen negative for known pathogens will also be screened for veterinary viruses."

Specimens collected will be isolated, sequenced and studied by collaborators in Singapore in an effort to detect emerging strains of viruses prone to transmission from a zoonotic origin.

In addition to collaboration with Duke - NUS, this project is being carried out in collaboration with the Vietnam National Institute of Health and Epidemiology, and the Vietnam Military Institute of Preventative Medicine.

"This effort will hopefully lead to an improved capability of Vietnam's military and civilian public health laboratories to detect both common and novel respiratory viruses. The design of this project could potentially allow for broader coordination with military, government and academia partners in the region to prevent, detect and respond to an emerging respiratory virus epidemic," said Warkentien.

"Being able to prevent and detect an emerging epidemic could play a valuable role in protecting the health, security and wellness of our warfighters and partner nations' populations," he concluded.

The ASTMH Annual Meeting draws tropical medicine and global health professionals representing academia, government, non-profits, philanthropy, NGOs, industry, military and private practice. The meeting is designed for researchers, professors, government and public health officials, military personnel, travel clinic physicians, practicing physicians in tropical medicine, students and all health care providers working in the fields of tropical medicine, hygiene and global health. The Annual Meeting is a five-day educational conference that includes four pre-meeting courses and draws approximately 4,400 attendees.

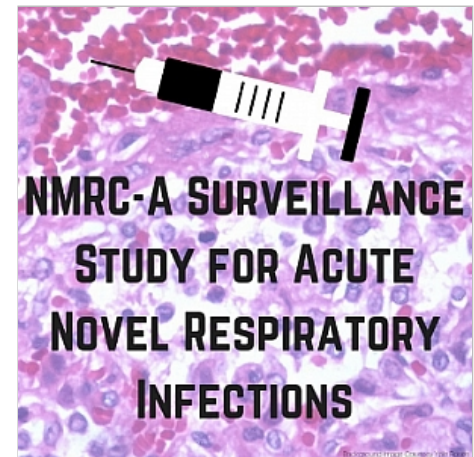
The Naval Medical Research Center's (NMRC) eight laboratories are engaged in a broad spectrum of activity from basic science in the laboratory to field studies at sites in austere and remote areas of the world to operational environments. In support of the Navy, Marine Corps, and joint U.S. warfighters, researchers study infectious diseases; biological warfare detection and defense; combat casualty care; environmental health concerns; aerospace and undersea medicine; medical modeling, simulation and operational mission support; and epidemiology and behavioral sciences.

NMRC and the laboratories deliver high-value, high-impact research products to support and protect today's deployed warfighters. At the same time researchers are focused on the readiness and well-being of future forces.

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November 8, 2017

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